New Hampshire's Granite State Clean Cities Coalition strives to reduce dependence on foreign oil and improve air quality through the promotion of:

- **Alternative fuels & fuel blends**
- **Alternative fuel vehicles**
- **Advanced technologies & hybrid vehicles**
- **Improved fuel economy & reduced idling**

Granite State Clean Cities Coalition Alternative Transportation Update

March 3, 2009

The Granite State Clean Cities Coalition (GSCCC) was formed in 2002, under the U.S. Department of Energy's Clean Cities program. Clean Cities contributes to the energy, environmental and economic security of the Unites States by supporting local decisions to reduce our dependence on imported petroleum. Through Clean Cities' support, the GSCCC has grown to be a collaborative of over 75 public and private interests from all regions of New Hampshire. GSCCC stakeholders share the common goals of reducing use of foreign petroleum and reducing air pollution through the use of cleaner, domestically produced alternative fuels and advanced technologies for motor vehicles. The New Hampshire Department of Environmental Services, Air Resources Division serves as the coordinator for GSCCC. Funding for projects is provided from both the private sector and federal grants, including US DOE Clean Cities and US Department of Transportation Congestion Mitigation and Air Quality (CMAQ) grants.

Current Projects:

- Batchelder Biodiesel Refineries (BBR) constructed a biodiesel production facility in Nashua, NH in 2008. The facility currently produces biodiesel from yellow waste grease and will utilize brown grease in the near future. Their current capacity from this facility is 250,000 gallons per year.

- BBR is planning a second facility in Keene where they are partnering with Keene State College. They are currently in lease negations for a 12,000 square foot facility to include the BBR refinery and a lab & research facility to be operated by KSC. The lab will test a variety of feedstocks for viability and emissions impacts as well as offer low cost ASTM fuel quality testing for biodiesel producers in the region.

- Rymes Propane & Oil, Swansey, opened a heated, metered biodiesel blending facility in June. Rymes sells primarily heating oil blends, but also operates five retail B20 vehicle fueling stations.

- Evans Group operates four stations that sell biodiesel and Simply Green in Dover sells biodiesel blends at a retail location as well as in bulk.

- Simply Green has opened a "Congreenience" station in Dover, NH, offering two biodiesel blends; they hope to expand to offer E85.

- UNH continues to expand their compressed natural gas vehicle program, upgrading their CNG fueling station for faster filling and eventually public access. They currently operate six dedicated CNG buses, four bi-fuel pickup trucks, several CNG Honda Civics, and electric cargo van, and a small electric truck for housing. These projects were supported by a combination of Clean Cities and CMAQ funding. UNH also runs 80% of their diesel fleet on B20 biodiesel

- Altantic Biodiesel, in Salem, NH, began producing biodiesel in 2008. They are currently retooling their facility to enable them to use a variety of feedstocks. They are capable of producing 3 million gallons of biodiesel per year.

- Public Service Company of NH will be piloting the use of hybrid bucket trucks in Merrimack, Hillsborough, Rockingham and Strafford Counties. Funding for this project is provided by a CMAQ

grant from DES/GSCCC. This project will reduce fuel use by approximately 45% compared with conventional bucket trucks.

- A total of twelve fueling stations around the state sell blended biodiesel for transportation fuel, including one operated by the NH Dept. of Transportation.

- To encourage the growth of biodiesel production in New Hampshire, the Biodiesel Study Commission worked with the 2008 General Court to pass legislation to ensure biodiesel fuel quality standards for any biodiesel sold in the state as well as legislation that lessons the tax burden for small quantity producers.

Roadblocks for expansion of alternative fuels.

Biodiesel

- Lack of adequate blending terminals in the state limits the ability of NH producers to sell and distribute their product. Atlantic Biodiesel has recognized that they will need to transport their biodiesel out of state for blending thus adding to the cost.

- Lack of in-state blending and distribution for biodiesel blends also leads to high cost for biodiesel blends, thereby limiting the ability of many in-state distributors to offer vehicle and heating fuel blends to their customers.

- Increases in the price of feed stocks, particularly soybean oil, combined with the recent decline in petroleum prices, has created a very unstable market for our start-up biodiesel producers.

- Stakeholders hope to clearly identify solutions and utilize stimulus funding to encourage the development of a local blending infrastructure for New Hampshire.

Compressed Natural Gas (CNG)

- Lack of regional refueling infrastructure limits the ability of fleets to incorporate CNG vehicles in their vehicle mix, and lack of factory produced CNG vehicles further increases the cost of the vehicles. CNG vehicles are among the lowest emission vehicles available.

- GSCCC is currently exploring a number of options to develop a CNG infrastructure corridor utilizing Clean Cities stimulus package funding in partnership with Clean Cities Coalitions in Vermont and Maine.

Hybrid Technologies

- Battery technologies, battery replacement and the environmental impact of the current hybrid vehicle battery are areas of concern. Hybrid technology is developing rapidly and is an appropriate technology for the medium and heavy duty vehicle fleets. GSCCC continues to support medium and heavy duty hybrid projects, particularly for vehicles that operate in congested traffic areas or that need power while stationary, such as utility trucks, as funding allows. When these vehicles use B20 biodiesel, they offer even greater emissions reductions.

Ethanol (E85)

- There are no E85 stations in New Hampshire although GSCCC is assisting stakeholders in pursuing funding for E85 fueling infrastructure. Ethanol has received recent scrutiny because most is corn based. Corn is a resource intensive crop to produce requiring maximum amounts of land for yield per acre as well as large quantities of water and fertilizer. Corn based ethanol has provided opportunity to mid-west farmers and it has been helpful to build the base for an infrastructure to support cellulosic ethanol. Cellulosic ethanol does hold promise for the Northeast – infrastructure development in anticipation of cellulosic ethanol would be helpful.